

ABSTRACT OF THE DISCLOSURE

A circuit for matching the impedance of a narrow-band resonator filter presented to a port over a broad range of frequencies employs a second resonator that has substantially the same transfer characteristic as the resonator filter. The resonator filter is isolated from the output port using a resonator having a dual characteristic that behaves as a short circuit in the pass-band of the resonator filter, and is an open circuit in the stop-band of the resonator filter.

The second resonator is isolated from the port using a resistor that has a value on the order of the ideal or desired impedance to be presented at the port. The circuit provides an impedance at the port that is approximately equal to the desired impedance in the stop-band, and an impedance that is slightly degraded in the pass-band, and particularly at the on-frequency of the resonator filter. The circuit is particularly useful when narrow band-pass resonator filters are employed in broadband multichannel systems coupled to the input ports of an impedance sensitive load, such as a passive mixers used to perform frequency conversion over a wide range of frequencies.

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